STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name:The Big Kahuna Agreement #: 30-076006

2. Name of applicant: Department of Natural Resources

3. Address and phone number of applicant and contact person:

   Department of Natural Resources
   950 Farman Ave N
   Enumclaw, WA 98022-9282
   360-825-1631
   Contact Person: Edward Keeley

4. Date checklist prepared: 07/15/2004

5. Agency requesting checklist: Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

   a. Auction Date: 02/22/2005
   b. Planned contract end date (but may be extended): 10/31/07
   c. Phasing: None

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   a. Site preparation: None.

   b. Regeneration Method: Hand planting of Douglas-fir shall be completed within the first two years after completion of harvest activites.

   c. Vegetation Management: Needs will be assessed 5 –7 years after harvest.

   d. Thinning: Needs will be assessed 10 – 15 years after harvest.

   Roads: The roads that are part of this proposal will receive periodic road maintenance such as grading; ditch cleanout, and vegetation management, during harvest activities. The mainline haul roads outside the harvest area will be used for future forestland management activities such as timber harvesting, recreation, and fire control. The abandonement of roads as part of this proposal will be in accordance to the current Forest Practice Standards, after completion of harvest activities. The roads that will remain open after completion of harvest activities will be maintained as part of a road maintenance plan for the Tahoma Block. The purchaser of the

timber sale contract or a designated maintainer will be required to complete road maintenance on those roads used as part of this proposal.

Rock Pits and/or Sale: Rock for the construction of the landings and surfacing for the new road construction may come from the following rock pits. The Zig Zag Pit located in the NE ¼ SE ¼ SW ¼ SW ¼, Sec 2, T14N, R6E, W.M. The F-120 Pit located in the NW¼ NW¼ NE ¼ NW ¼, Section 6, T14N R6E, W.M. The two pits are existing pits, the pits will remain open for future use such as; surfacing of timber sale roads and routine road maintenance.

Other: The abandonment of the temporary road construction within the proposed harvest area.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☐303 (d) – listed water body in WAU: ☐temp ☐sediment ☐completed TMDL (total maximum daily load):
☐Landscape plan:
☐Watershed analysis:
☐Interdisciplinary team (ID Team) report:
☒Road design plan: dated 7/28/04*
☒Wildlife report: dated 7/27/04*
☒Geotechnical report: 8/20/04*
☐Other specialist report(s):
☐Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):
☒Rock pit plan: Part of the road plan, dated 7/28/04*.
☒Other:

1) Owl habitat surveys for 1996.
2) Forestry Handbook (1999).
3) State Soil Survey
4) GIS WAU Analysis: Maps and data pertaining to Mass Erosion and Erosion Potential, Hydrologic Maturity and roads per square mile, rain-on-snow zone. This information has been adjusted where more recent and accurate proprietary data exists.
5) DNR Trax System/P&T Special Concerns Report.
6) Nisqually River Management Plan.
7) Habitat Conservation Plan
8) Department of Fish And Wildlife, Priority Habitat Species (PHS)

Referenced documents may be obtained at the South Puget Sound Region office in Enumclaw during the comment period.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒HPA ☐Burning permit ☐Shoreline permit ☒Incidental take permit ☒FPA ☒Other: Board of Natural Resources approval

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. Complete proposal description:

The Big Kahuna timber sale lies within the boundaries of the Reese Creek WAU. The project area selected for consideration was approximately 251 acres in size and was reduced to a net acreage of 160 acres plus right of way, due to protection measures put in place for the streams, wetlands, and unstable soils. The proposed activity consists of two regeneration harvest units plus right of way, 4,841 feet of pre-haul maintenance (existing segment of the 11 Road), 12,326 feet of new road construction (extention of 11 and spur roads inside the units), and subsequent abandonment. Approximately 8,250 mbf of mixed conifer and hardwoods will be harvested from the units and the R/W. The number of leave trees for the sale will be 7% of those trees 12 inch and over at DBH per acre. The majority of the leave trees are scattered across the units, as well as in several clumps. In addition, unique individual wildlife trees have been selected as leave trees.

Unit #1

Estimated Volume: 3,999 Mbf
Gross acres in proposal: 125
Net acres in proposal: 75
Type of harvest: Regeneration
Logging system: Ground based and cable
Roads: Refer to Road activity summary in A 11.c below
Landings: 2 Acres
Rock pits: Refer to Rock Pits in A 7 above.
Other timber sales: None
Special forest products sales: None

Right of Way (R/W)

Estimated Volume: 231 Mbf
Gross acres in R/W: 6
Net acres in R/W: 3.6 (with standing timber)

Unit #2

Estimated Volume: 4,020 Mbf
Gross acres in proposal: 126
Net acres in proposal: 85
Type of harvest: Regeneration
Logging system: Ground based and cable
Roads: Refer to Road activity summary in A 11.c below
Landings: 3 Acres
Rock pits: Refer to Rock Pits in A 7 above.
Other timber sales: None
Special forest products sales: None

b. Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.

The proposed harvest units are located on gently rolling terrain to moderately steep hillsides with upland benches. Much of the proposed harvest area is on terrain steeper than 40 percent. Elevation of proposal area ranges from 1,592 feet to 2,609 feet.

The stand is hydrologically mature 60 to 70 year old second growth timber and is within a designated Northern Spotted Owl Dispersal Management Area. The proposal area lies adjacent to Reese Creek and the Nisqually River.

Upland species such as deer, elk, black bear, and cougar use the proposal area. Beaver, rough-skinned newts, amphibians, and cutthroat trout are known to reside and/or use the streams and associated riparian areas. Plants such as salmonberry, devils club, Vaccinium spp., Oregon grape, and sword fern are common understory species within the proposal area. Additionally, skunk cabbage, and sedges are found within the riparian buffers adjacent to the proposal.

Short-term objectives:
1) Generate revenue for the trust through final harvest of the existing stand.
2) Provide legacy trees for the future stand. Legacy trees have been left scattered and and clumped within the sale area. The development of the clumps over time will promote structural diversity, while providing habitat for various species of animals and birds.

Long-term objectives:
1) Timber Stand Improvement: a series of intermediate cuttings will be scheduled as needed, as the new stand develops. The primary objective of each treatment will be to stimulate wood production, and generate revenue.
2) Habitat Management: Create, maintain and improve the components within the developing stand with each succeeding treatment, as part of the overall objective to create quality spotted owl dispersal and wildlife habitat.
3) Resource Protection: The protection of soil productivity and water quality will remain priorities. Each harvest prescription will be crafted to prevent soil erosion and limit compaction. Large coarse woody debris will be left to contribute to site productivity. Management activities within the established RMZ's will be designed to maintain protection for water quality.
4) Create a sustainable source of revenue for the trust.

c. Road activity summary. See also forest practice application (FPA) for maps and more details.

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		14,015	3.9	0
Reconstruction		0		0
Maintenance		72,079		0
Abandonment		7,599	2.1	0
Bridge Install/Replace	1			0
Culvert Install/Replace (fish)	1			0
Culvert Install/Replace (no fish)	27*			

*10 of these culverts are temporary and will be removed prior to contract expiration.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

The proposed harvest units are located in the Nisqually River valley in the Tahoma State Forest in northeastern Lewis County, near the town of Ashford.

a. Legal description:

Section 5 Township 14 North, Range 6 East
Section 29 Township 15 North, Range 6 East
Section 32 Township 15 North, Range 6 East
Section 33 Township 15 North, Range 6 East

b. Distance and direction from nearest town (include road names):

The proposal is southwest of Ashford, approximately 5 miles by road via Highway 706, and the 1 Road system.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")

The entire proposal is within the boundaries of the Reese Creek WAU.

WAU Name	WAU Acres	Proposal Acres
REESE CREEK	4,779	160

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

Name of WAU or sub-basin	Acres	DNR managed acres	Private managed acres	Percent DNR managed land	Percent private managed land	Proposal Acres
Reese Creek	4,779	4,546	233	95	5	160

The table below reports recent timber harvest activity within the last seven years on Department lands, as well as future planned timber harvests on Department lands. The same table also reports recent past harvesting on private lands, but no attempt was made to predict

future timber harvests on private land. Data for Department harvests was compiled from the Department's GIS database. Data for private harvesting was estimated from WAU maps created in 2004.

NAME OF WAU	DNR ACRES EVEN-AGED HARVESTED IN LAST 7 YEARS + SOLD TIMBER SALES NOT HARVESTED YET (WILL BE EVEN AGED HARVESTING)	DNR ACRES UNEVEN-AGED HARVESTED IN LAST 7 YEARS	DNR PLANNED HARVEST ACRES WITHIN NEXT FIVE YEARS	PRIVATE ACRES EVEN-AGED HARVESTED IN LAST 7 YEARS	PRIVATE ACRES UNEVEN-AGED HARVESTED IN LAST 7 YEARS
Reese Creek	265	0	500 EVEN-AGED 1300 UNEVEN-AGED	32	0

The Reese Creek WAU is 4,779 acres in size, 5% is in private ownership, and the remaining 95% is managed by the Department of Natural Resources. In the past seven years on private lands within the WAU, approximately 14% of the land base has had some form of Forest Practices harvest or activity. In the past seven years on the DNR managed lands within the WAU, approximately 3**%** of the land base has had some form of Forest Practices harvest or road activity. The DNR managed lands within the WAU have had permits on approximately 0.4% of the land base per year over the last seven years. This rate of harvest will increase to an average 1%, until minimum dispersal levels have been reached. In the next five year period a combination of regeneration harvests and variable density thinnings will be used to harvest timber from the area. The variable density thinnings will be designed to improve dispersal habitat.

The road maintenance schedule in the WAU is on track to have all fish blockages removed by 2015. Much of this work will be accomplished over time in conjunction with several timber sales, currently in the planning process. In addition to the fish blockages any undersized culverts found as part of the planning processes, will be replaced.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☐Steep Slopes, ☐Mountainous, ☒Other: Flat to steep slopes

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Reese Creek WAU is flat or rolling in the portion of the WAU adjacent to the Nisqually River. It abruptly changes to hilly and steep slopes in the higher elevations of Reese Creek WAU. The upper portion of the WAU near the headwaters of Reese Creek contain slopes that exceed 75%, although most slopes in this portion of the WAU range between 30% and 50%. The elevation ranges in the Reese Creek WAU from 1600 feet near the Nisqually River to 3,600 feet on the upper ridges of the WAU.

The annual rainfall within the WAU is between 50 and 70 inches, mostly falling between October and June. The temperatures range from a low of 10 degrees Fahrenheit at times in the winter to highs of 90 degrees or more during the summer. In areas above 2,500 feet snow normally covers the ground from December through March. The primary timber types are Douglas fir and western hemlock, although noble fir and silver firs are found in the higher elevations of the WAU. The majority of the private lands in the WAU are in plantations less than 25 years old.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

The proposed sale area is a representative example of the Reese Creek WAU.

b. What is the steepest slope on the site (approximate percent slope)?

Unit 1; The steepest slopes are 75 percent on 2 percent of the sale area.

Unit 2; The steepest slopes are 75 percent on 4 percent of the sale area.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
0485	V.CINDERY LOAMY SAND	30-65	98	LOW	MEDIUM
0484	V.CINDERY LOAMY SAND	8-30	55	INSIGNIFIC'T	LOW
0488	BELLICUM-ROCK OUTCROP-COMPLEX	65-90	5	No Data	No Data
5241	CINDERY SANDY LOAM	0-8	2	INSIGNIFIC'T	LOW
4275	SAND	0-3	0	INSIGNIFIC'T	LOW

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

In the immediate vicinity of the sale there are convergent headwalls, bedrock hollows, and shallow rapid failures.

2) Is there evidence of natural slope failures in the sub-basin(s)?

☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
There are no deep-seated landslides with the proposed units. Evidence of past natural slope failures was found during the analysis of aerial photos and field inspections. Some of the natural slope failures have occurred from channel migration during rain on snow events. There are deep-seated landslides in the steeper portions of the sub-basin, primarily in the eastern portion of the Reese Creek drainage. None of these failures are associated with any timber harvest activities.

3) Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?

☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:* There have been surface failures on cut and fill slopes within the right of ways of the access roads to the timber sale units and recreation sites.. These types of failures are generally associated with peak rain on snow events.
Associated management activity: Timber haul and Recreational Users

4) Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?

☐*No* ☒*Yes, describe similarities between the conditions and activities on these sites:* There are similarities between the proposed sale area and those areas within the sub-basin where the failures have occurred. There are areas of converging topography, where slopes are approximately 75% and include some rock outcrops. These areas have no indicators of past instability and appear to be stable.

5 Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.

Road and Unit boundaries were located to avoid those conditions that could result in potential erosion from unstable slopes. Harvest boundaries have been located away from steep slopes, inner gorges, bedrock hollows, convergent headwalls, and streams.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: 3.4 Approx. acreage new landings: 5.0 Fill source: On site
The fill needed to achieve grade will be generated from the road prism.

e. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Some minor erosion may occur, however, prudent construction techniques and routine maintenance practices will minimize, if not eliminate, the amount of erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? ***Approximate percent of proposal in permanent road running surface (includes gravel roads):***

The impervious surfacing consists of rock applied to the surface of the roads and landings. This amounts to approximately 2.1% of the sale area.

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

No road construction will be permitted between November 1 and May 31st without written approval from the contract administrator. At any time during periods of wet weather conditions the yarding of timber, road construction and hauling will not be permitted if excessive rutting occurs. No ground based yarding will be permitted on slopes greater than 40%. Drainage structures will be placed to reduce the velocity and volume of ditch water. The conditions and requirements of the road abandonment plan are intended to minimize the impact of the fine sediments generated from the operation. The road abandonment efforts will include: constructing non-drivable water bars, keying water bars into ditches, tank trap barriers, removing cross drain culverts and leaving the trench open, slope trench walls, scatter right of way debris over the road prism and grass seed exposed soils. In addition all exposed soils within 50 feet of any live stream will be covered with a 4-inch deep layer of straw.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by truck traffic. If any slash is burned, it will be done in accordance with the State Smoke Management Program.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

Located on each side of Unit 1 of this proposal is a Type 3, Type 4 stream system. The stream systems flow northeast, directly into Reese Creek. Reese Creek flows below Unit 1 and 2. Unit 2 is located between the Nisqually River and two Type 4 stream systems (one flows into Reese Creek, the other into the Nisqually River).

a) Downstream water bodies:

As mentioned above streams adjacent to the proposal flow into Reese Creek or the Nisqually River.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Reese Creek	3	1	180
Nisqually River	1	1	200
Un-named stream	3	2	180
Un-named stream	4	4	100
Un-named stream	5	3	None

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

The streams adjacent to the proposal were identified during the initial field reconnaissance. The stream typing was determined using resource information gathered from Forest Practices, The Nisqually Indian Tribe, and the Washington Department of Fish and Wildlife. The South Puget Sound Region Wildlife Biologist has reviewed and confirmed the stream types. Once the stream typing was confirmed, the appropriate buffer was applied. Refer to Timber Sale Map for locations.

Buffers, as required by the Habitat Conservation Plan, protect the streams within and adjacent to the sale area. 200-foot buffer on the Nisqually River, 180-foot buffers protect the Type 3 streams. 100 buffers protect Type 4 streams. The buffers will protect the water quality of the streams and will provide shelter and foraging areas for the riparian species that are indigenous to the area. The presence and maintenance of the buffers will prevent fine sediments generated as a result of the logging operation from entering the surface waters. The size and locations of the buffers will assure that water quality is protected. There are a sufficient number of trees in the buffers to maintain necessary shade levels and the dead and down trees needed to provide quality wildlife habitat. Type 3 and Type 4 stream crossings for roads will be in accordance with an approved HPA and blanket HPA. See attached map for locations.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):

With exception to Reese Creek and the Nisqually River, felling, yarding and hauling will take place within 200 feet of all the above water types. No yarding over or through any typed water will be allowed. Road construction will cross Type 3 and 4 streams. Erosion control measures will be applied during these activities in accordance with Forest Practice and HPA requirements.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☐*No* ☒*Yes, description:*

Yes. A temporary diversion of two Type 4 streams during the road building/culvert installation will take place.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Yes. Approximately 16% of the WAU contains soils with high mass wasting potential, approximately 2% of the WAU contains soils with high erosion potential. These soils are generally located on steep slopes, in the higher elevations. The potential exists for eroded material to impact some of the streams within the proposal area due to road work.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*

The Nisqually River can be described as a active river in a constant state of change. This can be attributed in part to its large drainage. Major changes in the amount of large organic debris, channel width and location primarily due to large scale rain on snow events. The lower reaches of Reese Creek and some of the tributaries also show changes due to major rain on snow events.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☒*No* ☐*Yes, explain:*

The current proposal will not significantly impact stream or water quality. This conclusion is based upon examination of past logging and harvesting activities within the WAU. Some minor erosion may occur although this proposal does not increase the potential for mass wasting or an event that would significantly impact stream or water quality. Erosion control measures will be implemented as described in B1h above to reduce the potential for sediment delivery to surface waters.

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?

The Reese Creek WAU contains an average of 2.3 miles of road per square mile. On the non-DNR lands the average is 3.1 miles of road per square mile and on the DNR lands the average is 2.0. Approximately 75% of the ditches within the WAU carry water for extended periods of time.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*

Reese Creek WAU 60% in the ROS zone.

Approximate percent of sub-basin(s): Sub-basin #18370 is 47%. Sub-basin #18371 is 78%.

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

This information is for DNR managed lands only:

1. SUB-BASIN NAME	2. TOTAL ROS ACRES (DNR)	3. HYDRO MATURE TARGET ACRES (2/3 of Column 2)	4. CURRENT DNR ACRES IN HYDRO MATURE FOREST	5. ACRES OF HYDRO MATURE FOREST TO BE REMOVED	6. SUPRLUS (+) OR DEFICIT (-) ACRES AFTER ACTIVITY
SUBBASIN #18371	1,856	1,206	1,406	93	+107
SUBBASIN #18370	631	416	631	7	+208

Approximately 63 percent of the proposal is with the significant rain-on-snow zone.

Sub-basin #18371 of the Reese Creek WAU is 72% hydrologically mature.
Sub-basin #18370 of the Reese Creek WAU is 99% hydrologically mature.

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐*No* ☒*Yes, describe observations:*

Significant changes to several un-named stream channels in the Reese Creek WAU are evident. There is visible evidence of debris dam breaks, debris flows, torrents, and channel dimension changes. Generally the damage is caused by debris torrents and slope failures that have occurred during periods of peak flow, caused by major rain-on-snow events and have delivered directly to streams. These changes were caused by slope failures and increased flows triggered by past, poor harvest methods, railroad line locations and construction techniques.

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

This proposal is in the same general area as other recent harvesting activities. There is no indication that past, current, or foreseeable future proposals working in combination with this proposal will contribute to a peak flow impact in the Reese Creek drainage or the WAU.

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒*No* ☐*Yes, possible impacts:*

16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.

This proposal will remove approximately 4.5 percent of the hydrologically mature timber from the WAU. The increase in hydrologically immature stands and the road network should not create any potential impacts related to increase peak flows during rain-on-snow events. The current guidelines for the HCP implementation include prescriptions that address the potential for peak flow impacts. The HCP procedure PR-14-040-006, assessing the hydrological maturity levels assures that the sub-basins within the rain-on-snow zone will not be allowed to reach a point were they are at risk to contribute to a peak flow problem. This proposal includes the maintaining of cross drains and ditch outs on the haul routes. These structures will ensure that ditch water is deposited on the forest floor and not allowed to flow directly into typed waters. The leave trees will help to minimize soil displacement and surface erosion.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Insignificant amounts of motor oil, grease, and hydraulic fluids may leak from equipment or be washed off equipment by rainwater. No lubricants will be disposed of on site.

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒*No* ☐*Yes, describe:*

a) Note protection measures, if any.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The cross drain culverts will be disperse storm water from the ditches onto the forest floor. The frequent spacing of culverts will minimize the distance water flows before being dispersed onto the forest floor. Consequently, no surface or ditch water will flow directly into existing stream channels. Ditch outs will also be used to channel runoff onto the forest floor. No water runoff will be channeled onto exposed soils.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Minor amounts of lubricants and other petroleum products, which wash off the machinery during periods of rain onto the forest floor, could reach ground waters.

a) Note protection measures, if any.

The lubricants and petroleum products used by the machinery will not be disposed of on the site.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

Good landing location, sound construction techniques utilizing the best management practices, adequate ballast and surfacing, seasonal restrictions on construction, hauling and yarding will minimize potential surface erosion problems. The frequent spacing and placement of the culverts with head walls, catch basins and energy dissipaters, along with the use of ditch outs will reduce or control surface, ground, and water runoff impacts.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☐maple, ☐aspen, ☒*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☐*salal,* ☐*other:*
☐grass
☐pasture
☐crop or grain
☐wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒devils club ☒other: sage
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

A review of P&T special concerns report and the Natural Heritage Data base along with site visits found no sensitive plant species.

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

Mature second growth conifers and hardwoods will be harvested from the proposed area. During the felling and yarding process the subordinate vegetation within the sale area will be damaged.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

Unit #1: The stands immediately adjacent to the proposed harvest area on all boundaries are typical of the 2nd growth stands 60 to 70 years old, found within the WAU at the same elevation and aspect.

Unit #2: The entire unit is bounded by mature 2nd growth conifer ranging in age from 60 to 70 years, similar to unit #1.

2) Retention tree plan:

Unit #1 and #2

The total number of leave trees is seven percent of those trees in the stand that are over 12 inches in diameter. This amounts to 8 trees per acre, 600 trees in Unit 1 and 680 trees in Unit 2. The leave trees are scattered, or clumped through out the sale area. Yellow leave tree tags have identified all leave tree clumps. Species preference was Douglas fir, western hemlock, western red cedar. In certain circumstances where it was preferable to leave hardwoods red alder or black cottonwood were selected as leave trees. These leave trees are a representative sample of those trees found in the stand. The implementation of this strategy will assure the recruitment of important structural components for future wildlife habitat.

c. List threatened or endangered *plant* species known to be on or near the site.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

A review of P&T special concerns report and the Natural Heritage Data base along with site visits found no sensitive plant species.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The harvested area will be replanted with 200 Douglas fir seedlings per acre and 100 Western Red Cedar seedlings per acre within two years of harvest activities. In addition, approximately 1,280 wildlife and green recruitment trees will be left after harvest. Approximately half of the leave trees are in clumps ranging in size from 0.25 to 1.3 acres. The remainder of the trees are scattered through out the units. The clumps and scattered leave trees are located along topographic breaks in the landscape to give the units a tattered, feathered appearance and avoid straight lines and uniformally shaped harvest units.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☒hawk, ☐heron, ☐eagle, ☐songbirds, ☐*pigeon,* ☐other:
mammals: ☒deer, ☒bear, ☒elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

The proposed sale area is in designated Northern Spotted Owl dispersal habitat. This proposal will not reduce the area below the 50% threshold target level. This proposal combined with all other sales to be offered from July 1, 2004 to July 1, 2005 will not bring the area below threshold. Currently the Reese Creek Watershed Administrative Unit contains 67**%** dispersal habitat, according to the DNR's GIS system.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*
Most of western Washington is located in the Pacific flyway.

d. Proposed measures to preserve or enhance wildlife, if any:

Green trees were selected from the dominant and co-dominant trees within the proposed sale area. The wildlife trees were chosen from those trees that are deformed or damaged. Leave trees and wildlife trees are well distributed throughout the proposed sale area. Additionally those hard snags that are safe to leave standing will be left. The proposed units have buffers protecting the streams adjacent to the sale area. These buffers, while protecting the water quality of the streams, will provide shelter and foraging areas for riparian dependent species that are indigenous to the area. The development of the leave trees along with the existing snags will , over time promote structural diversity and assure the development of a biological legacy while providing nesting habitat for cavity dwellers known to use the area. No harvest operations will occur within the buffers established on thestreams adjacent to the sale area. The leave tree clumps and the structures they protect are well distributed throughout the sale area.

1) Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.

Species /Habitat: Riparian Protection Measures: HCP no cut buffers

Species /Habitat: Upland Protection Measures: Scattered and clumped trees

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Petroleum products used for equipment

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

There may be minimal hazards, such as minor fuel spills, and fires.

1) Describe special emergency services that might be required.

The Departmnet of Natural Resources, Private, and FirProtection District suppression crews maybe needed in case of wildfire. Emergency medical services for personnel injuries. Hazardous material spills may require Department of Ecology and/or county assistance.

2) Proposed measures to reduce or control environmental health hazards, if any:

Compliance with State fire laws and fire equipment will be required on site during the closed fire season. Operations will cease if relative humidity falls below 30 percent.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

There will be short-term, low-level and high level noise created by the use of harvesting equipment within the sale area. This type of noise has been historically present in this geographical area. The typical hours of operation will be Monday through Friday from 7:00 a.m. to 7:00 p.m.

3) Proposed measures to reduce or control noise impacts, if any:

None.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*
Timber production and Forest Management

b. Has the site been used for agriculture? If so, describe.
No.

c. Describe any structures on the site.
No.

d. Will any structures be demolished? If so, what?
No.

e. What is the current zoning classification of the site?
Forest Resource Zone

f. What is the current comprehensive plan designation of the site?
Timber Production

g. If applicable, what is the current shoreline master program designation of the site?
Does not apply.

h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.
No.

i. Approximately how many people would reside or work in the completed project?
Does not apply.

j. Approximately how many people would the completed project displace?
Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:
None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
This proposal is located in the Forest Resource Zone of Lewis County. The current proposal is compatible with that designation. The use of harvest planning information, adherence to the Forestry Handbook along with information taken from DNR’s GIS system assure that this proposal is compatible with the existing and projected land uses and plans. The DNR’s Forestry Handbook is on file at the DNR’s Regional office at Enumclaw.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:
Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

The background viewshed as seen from the Nisqually Valley around the town of Ashford, will be altered, as well as the foreground view from the forest roads near the proposed harvest area.

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐*No* ☒*Yes, viewing location:* Ashford Washington

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☐*No* ☒*Yes, scenic corridor name:* Highway 706

3) How will this proposal affect any views described in 1) or 2) above?

The background and foreground views will be affected for two to five years, until the new plantations are visible.

c. Proposed measures to reduce or control aesthetic impacts, if any:

The buffers adjacent to streams plus the clumped and scattered leave trees will minmize the change in views created by the harvest operations. The relationship and location of the harvest to past activities will create a scattered or fragmented look across the landscape.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?
None.

d. Proposed measures to reduce or control light and glare impacts, if any:
None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

There are informal recreational activities such as hiking, fishing and hunting in and around the Reese Creek drainage.

b. Would the proposed project displace any existing recreational uses? If so, describe:

No existing recreational uses would be displaced.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

None known.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None known.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

None.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The Tahoma State Forest is accessed from Highway 7 and Highway 706.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

Traffic from this operation will temporarily increase noise, dust and vehicle density that may result in a decrease in safety. Truck traffic from this individual operation should not increase the need for public maintenance.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No, the nearest public transit is 25 miles away in Eatonville.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Yes, refer to the roads information in A. 11 of this document. See the attached timber sale map.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

There will not be any increase over historical norms.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

There will be 10 to 12 round trips per day while the operation is active. Peak volumes would occur during the yarding and loading activities between 7 am and 7 pm of the operating period.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Accidents would need exiting emergency service provider. Wildfires would need fire response from DNR and county resources.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

None

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Eric Willhite _____ Date: 07/19/04
Forester1

Reviewed by: Herb Cargill _____ Date: 8/19/04
Operations Manager

Approved by: _____ Date: _____
Eric Schroff, South Puget Sound Region Manager